WEST Search History

DATE: Monday, August 12, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L3	L2 and photosensitizer$	8	L3
L2	l1 and (lactose or trehalose)	735	L2
L1	liposomes same (capsule$)	1497	L1

END OF SEARCH HISTORY

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End of Result Set

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L3: Entry 8 of 8 File: USPT

DOCUMENT-IDENTIFIER: US 5389378 A
TITLE: Benzoporphyrin vesicles and their use in photodynamic therapy

Brief Summary Text (6):
Photodynamic therapy (PDT) involves the action of light on a photosensitizer retained in diseased, especially cancerous tissue to produce selective cell/tissue kill. The application to the treatment of cancer and other disease states depends upon the relative selective retention of the agent in a tumor or other cancerous tissue, low systemic toxicity and the ability of the activating light to reach the diseased site. Sensitizers in clinical use include the porphyrin derivatives such as hematoporphyrin and a purified form known as dihematoporphyrin.

Brief Summary Text (11):
Benzoporphyrin derivative (BPD) represents a second generation of photosensitizers which are superior to HPD. BDP is a chlorin-like porphyrin composed of four structural analogues following synthesis. All four analogues have an identical reduced tetrapyrrol porphyrin ring. Each analogue differs only by the position of a cyclohexadiene ring which may be fused either at ring A or ring B of the porphyrin (A or B analogues) and the presence of either two acid groups (diacids) or one acid and one ester group (monoacids) at rings C and D of the porphyrin (See FIG. 1). All four analogues are hydrophobic, absorb red light at about 700 nm and efficiently produce singlet oxygen. Despite the sensitivity of all four molecules, they differ in their light activated cytoxicity in vitro and in vivo.

Detailed Description Text (3):
Benzoporphyrin derivative (BPD) is a chlorin-like photosensitizer and is represented by four analogues, two of which are diacids and two of which are monoacids. All four analogues have an identical reduced tetrapyrrol porphyrin ring. Each analogue differs only by the position of a cyclohexadiene ring which may be fused either at ring A or ring B of the porphyrin (ring A or B analogues) and the presence of either one or two acid groups (monoacids and diacids, respectively) at rings C and D of the porphyrin moiety (See FIG. 1). All four analogues are hydrophobic, absorb red light at about 700 nm and efficiently produce singlet oxygen. Despite the sensitivity of all four molecules, they differ in their light activated cytoxicity in vitro and in vivo.

Detailed Description Text (10):
The present invention also relates to storage stable BPD containing liposomes. For example, after loading the liposomes with BDP, the liposomes may then be dehydrated either in the presence or absence of sugars such as trehalose, and may be stored in this state for indefinite periods of time; see U.S. Pat. No. 4,880,635, Janoff et. al., entitled "Dehydrated Liposomes," issued Nov. 14, 1989, relevant portions of which are incorporated herein by reference. To maximize lipid and drug stability, storage of the preparation in a dehydrated form or at -20.degree. C. would be desirable.

Detailed Description Text (15):
The BPD-containing liposomes of the present invention may be dehydrated using standard freeze-drying equipment or equivalent apparatus, and, if desired, the liposomes and their surrounding medium can be frozen in liquid nitrogen before being dehydrated. Alternatively, the liposomes can also be dehydrated without prior freezing, by simply being placed under reduced pressure. Dehydration generally

requires the presence of one or more protective sugars in the preparation. A variety of sugars can be used, including such sugars as, for example, trehalose, maltose, sucrose, glucose, lactose, and dextran. In general, disaccharide sugars have been found to work better than monsaccharide sugars, with the disaccharide sugars trehalose and sucrose being most effective.

Detailed Description Text (25):
In certain cases, an oral mode of administration may be contemplated, in which case the BPD containing liposomes of the present invention can be used in the form of tablets, capsules, lozenges, troches, powders, syrups, elixirs, aqueous solutions and suspension, and the like. In the case of tablets, carriers which can be used include lactose, sodium citrate, and salts of phosphoric acid. Various disintegrants such as starch, and lubricating agents, for example, stearic acid may be used. For oral administration in capsule form, useful diluents are lactose and high molecular weight polyethylene glycols. When aqueous suspensions are required for oral use, certain sweetening and/or flavoring agents can be added.

Detailed Description Text (37):
Vesicles of EPC, EPC/Chol or DMPC containing benzoporphyrin (BPD-MA, BPD-MB and BPD-MA/BPD-MB 1:1) were prepared in 250 mM lactose, 50 mM mannitol, 100 mM NaCl, 20 mM citrate at pH 6.0. Aliquots (1 ml) in 10 ml glass vials were placed in a FTS Dura-Stop tray dryer pre-cooled to -35.degree. C. When the sample temperature reached -34.degree. C. the vaccum was switched on and the sample temperature was allowed to fall to -40.degree. C. The shelf temperature was then maintained at -35.degree. C. for 16 hours at a vacuum of <20 microns Hg. The shelf temperature was then raised as follows: -25.degree. C. for 8 hours, -15.degree. C. for 16 hours, -5.degree. C. for 1 hour, +5.degree. C. for 1 hour, +15.degree. C. for 1 hour and +30.degree. C. for 1 hour. Samples were then stoppered under full vacuum, removed and stored in the dark at -70.degree. C. This process yielded a homogeneous dark green lyophilate which was used to prepare liposomal benzoporphyrin of the present invention.

Detailed Description Text (45):
Dimyristoyl phosphatidylcholine (DMPC) and benzoporphyrin monoacid A (BPD-MA) are co-lyophilized from benzene:methanol (95:5) at a ratio of 100 .mu.g BPD-MA/umole DMPC. The dry powder is hydrated in 500 mM lactose, 100 mM mannitol, 100 mM NaCl, 20 mM citrate pH 6.0 at a BPD-MA concentration of 10 mg/ml (100 .mu.mole DMPC/ml) at 30.degree. C. for 30 minutes with gentle vortexing. The large multilamellar vesicles thus formed are sized to about 110-120 nm by extrusion through 2 stacked 0.1 micron Nucleopore polycarbonate filters at 30.degree. C. The BPD-MA liposomal suspension is then lyophilized by placing 1 ml aliquots in 10 ml glass vials which are then placed in a tray dryer pre-cooled to -35.degree. C. When the sample temperature reaches -34.degree. C. the vacuum is switched on and the sample temperature allowed to fall to -40.degree. C. The shelf temperature is maintained at -35.degree. C. for 16 hours at a vacuum of <20 microns Hg. The shelf temperature is then raised as follows: -25.degree. C. for 8 hours, -15.degree. C. for 16 hours, -5.degree. C. for 1 hour, +5.degree. C. for 1 hour, +15.degree. C. 1 hour and +30.degree. C. for 1 hour. Samples are then stoppered under full vacuum, removed and stored in the dark at -20.degree. C.

Detailed Description Text (54):
When EPC or DMPC vesicles containing BPD in aqueous suspension were lyophilized in the presence of lactose and mannitol a homogeneous green powder was obtained. Upon injection of sterile water the powder was readily hydrated yielding a green solution visually indistinguishable from the original suspension before drying. The samples analyzed before and after lyophilization and rehydration are presented in Table 3. Little change in mean vesicle diameter was observed.

Other Reference Publication (24):
Kessel, et al., "Chemistry of Hematoporphyrin-Derived Photosensitizers", 46, 563-568, (1987).

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Search Results - Record(s) 1 through 8 of 8 returned.

☐ 1. Document ID: US 6420591 B1

L3: Entry 1 of 8 File: USPT

US-PAT-NO: 6420591
DOCUMENT-IDENTIFIER: US 6420591 B1

TITLE: Carbamates and compositions thereof, and methods for their use for treating cancer, inflammation, or a viral infection

DATE-ISSUED: July 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rana; Tariq M	Piscataway	NJ		
Hwang; Seongwoo	Somerset	NJ		
Tamilarasu; Natarajan	Highland Park	NJ		

US-CL-CURRENT: 560/24; 424/604

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Desc | Image

☐ 2. Document ID: US 6407244 B1

L3: Entry 2 of 8 File: USPT

US-PAT-NO: 6407244
DOCUMENT-IDENTIFIER: US 6407244 B1

TITLE: Pyrrole-type compounds, compositions, and methods for treating cancer or viral diseases

DATE-ISSUED: June 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Murthy; Madiraju S. R.	Brossard			CA
Steenaart; Nancy A. E.	Dorval			CA
Johnson; Roy A.	Sausalito	CA		
Shore; Gordon C.	Montreal			CA

US-CL-CURRENT: 546/276.7; 546/278.4, 548/406, 548/468

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Desc | Image

☐ 3. Document ID: US 6407135 B1

L3: Entry 3 of 8 File: USPT

US-PAT-NO: 6407135
DOCUMENT-IDENTIFIER: US 6407135 B1

TITLE: Conjugates of dithiocarbamates with pharmacologically active agents and uses therefor

DATE-ISSUED: June 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lai; Ching-San	Encinitas	CA		
Wang; Tingmin	San Marcos	CA		

US-CL-CURRENT: 514/423; 514/2, 514/514, 530/402, 548/565, 548/573

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 4. Document ID: US 6402037 B1

L3: Entry 4 of 8 File: USPT

US-PAT-NO: 6402037
DOCUMENT-IDENTIFIER: US 6402037 B1

TITLE: Two-photon upconverting dyes and applications

DATE-ISSUED: June 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Prasad; Paras N.	Williamsville	NY		
Bhawalker; Jayant D.	Tonawanda	NY		
Cheng; Ping Chin	Williamsville	NY		
Pan; Shan Jen	Amherst	NY		

US-CL-CURRENT: 235/487; 235/454

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 5. Document ID: US 6274627 B1

L3: Entry 5 of 8 File: USPT

US-PAT-NO: 6274627
DOCUMENT-IDENTIFIER: US 6274627 B1

TITLE: Conjugates of dithiocarbamate disulfides with pharmacologically active agents and uses therefor

DATE-ISSUED: August 14, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lai; Ching-San	Encinitas	CA		
Vassilev; Vassil P.	San Diego	CA		
Wang; Tingmin	San Marcos	CA		

US-CL-CURRENT: 514/599; 514/706, 514/707

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

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☐ 6. Document ID: US 5916910 A

L3: Entry 6 of 8 File: USPT

US-PAT-NO: 5916910
DOCUMENT-IDENTIFIER: US 5916910 A

TITLE: Conjugates of dithiocarbamates with pharmacologically active agents and uses therefore

DATE-ISSUED: June 29, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lai; Ching-San	Encinitas	CA		

US-CL-CURRENT: 514/423; 514/514, 548/564, 548/573, 558/235

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

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☐ 7. Document ID: US 5912257 A

L3: Entry 7 of 8 File: USPT

US-PAT-NO: 5912257
DOCUMENT-IDENTIFIER: US 5912257 A

TITLE: Two-photon upconverting dyes and applications

DATE-ISSUED: June 15, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Prasad; Paras N.	Williamsville	NY		
Bhawalkar; Jayant D.	Tonawanda	NY		
He; Guang S.	Williamsville	NY		
Zhao; Chan F.	San Diego	CA		
Gvishi; Raz	K. Tiron			IL
Ruland; Gary E.	Grand Island	NY		
Zieba; Jaroslaw	Santa Rosa	CA		
Cheng; Ping Chin	Williamsville	NY		
Pan; Shan Jen	Amherst	NY		

US-CL-CURRENT: 514/356; 250/338.1, 430/338, 430/343, 514/709, 522/6, 546/329, 546/334, 568/34

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

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☐ 8. Document ID: US 5389378 A

L3: Entry 8 of 8 File: USPT

US-PAT-NO: 5389378
DOCUMENT-IDENTIFIER: US 5389378 A

TITLE: Benzoporphyrin vesicles and their use in photodynamic therapy

DATE-ISSUED: February 14, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Madden; Thomas D.	Vancouver			CA

US-CL-CURRENT: 424/450; 428/402.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

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Terms	Documents
L2 and photosensitizer$	8

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